REPORTER'S CERTIFICATE

STATE OF FLORIDA:
COUNTY OF DADE:

I, TANYA WARD ENGLISH, certify that I was authorized to and did stenographically report the foregoing deposition; and that the transcript is a true record of the testimony given by the witness.

I further certify I am not of counsel; I am not related to nor employed by any attorney to this suit, and am not financially interested in the outcome thereof.

Dated this 15th day of July, 1997.

TANYA WARD ENGLISH

STATE OF MINNESOTA — DISTRICT COURT
COUNTY OF RAMSEY — SECOND JUDICIAL DISTRICT
Case Type: Other Civil

THE STATE OF MINNESOTA,
BY HUBERT H. HUMPHREY, III,
ITS ATTORNEY GENERAL,

and — COURT FILE NO. C1-94-8565

BLUE CROSS AND BLUE SHIELD
OF MINNESOTA,

Plaintiffs,

-vs-

PHILIP MORRIS INCORPORATED,
R.J. REYNOLDS TOBACCO COMPANY,
BROWN & WILLIAMSON TOBACCO CORPORATION,
B.A.T. INDUSTRIES, P.L.C.,
LORILLARD TOBACCO COMPANY,
THE AMERICAN TOBACCO COMPANY,
LIGGETT GROUP, INC., THE COUNCIL FOR
TOBACCO RESEARCH - U.S.A., INC., and
THE TOBACCO INSTITUTE, INC.,

Defendants.

420 South Dixie Highway
Miami, Florida
Friday, 8:32 a.m.

July 11, 1997

VIDEOTAPED DEPOSITION OF JAMES MICHAEL SHULTZ

VOLUME II of II

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ALSO PRESENT:

JOHN JAY - Videographer

TANYA WARD ENGLISH, RPR - Court Reporter

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THE VIDEOGRAPHER: This is tape number 5, the continuing videotape deposition of Dr. James Shultz. Today is July 11, 1987, the time is 8:32 a.m. We are back on the record.

Counsel, please state their appearances for the record.

MR. BRAMAN: Richard Braman, Gray, Plant, Mooty law firm on behalf of R.J. Reynolds Company.

MR. LEDOUX: Dean LeDoux, Gray, Plant, also on behalf of R.J. Reynolds Company.

MR. GREGG: Tammie Gregg, Dorsey & Whitney, representing Philip Morris.

MS. STEWART: Kristen Stewart, Doherty, Rumble & Butler, on behalf of Lorillard Tobacco Company.

MR. ORENSTEIN: Howard Orenstein, Robins, Kaplan, Miller & Ciresi, on behalf of the State of Minnesota and Blue Cross, Blue Shield of Minnesota.

BY MR. BRAMAN:

Q Good morning, Dr. Shultz.

A Good morning.

Q You understand you are still under oath?

A I do.

Q Okay. I just want to note for the record

that we had agreed yesterday to start at 8:15. We were all here at 8:15, ready to go, but because Mr. Orenstein wanted to visit with the witness, we didn't get going until a little after 8:30.

MR. ORENSTEIN: I just needed to straighten my tie. I kind of got dressed in the cab.

(Whereupon, Defendant's Exhibit 215, Review and Cost of Alcohol Abuse, was previously marked for identification.)

BY MR. BRAMAN:

Q I'd like to show you a document, Dr. Shultz, that was previously marked for identification as Defendant's Exhibit 215 and I was to ask you if this is the 1985 study on the cost alcohol abuse in Minnesota that you worked on with Dr. Parker and testified about yesterday.

Defendant's Exhibit 215 is titled Review and Cost of Alcohol Abuse in Minnesota, Minnesota Department of Health, July 1985, and it has Bates numbers MN339030 through 167.

A Yes, this is the document we spoke about yesterday, produced in 1985, examining the cost of alcohol abuse in Minnesota.

Q Can you tell me who the primary author of this document was in terms of the writing?

A The first listed author is Dr. Parker, and I don't recall specifically the division of writing assignments, but I would really believe that Dr. Parker is the primary author.

And there were several sections on -- let me see if I can identify those. On the alcohol-attributable deaths, and some portions on the economics of alcohol abuse to which I contributed portions, but not all of the material.

Q And the portions you contributed related to the calculations?

A I have not reviewed this document in many years, and I would like to just take a moment just to quickly look at our estimates.

I believe that some of the graphics such as the bar charts that appear as an example on page 5 of the document, I believe that I produced those.

Q The page that has 339042 at the bottom right?

A That is correct.

Q Is this using Dr. Dean's famous graphic software?

A No, actually this was somewhat more recent software than Dr. Dean's. Still primitive by comparison to today's software.

I do not recall -- I do not believe I did the

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typing on many of the tables, but I believe I contributed to the section on alcohol-attributable deaths in Minnesota, Chapter 2. I do not recall the distribution of the writing efforts. I am quite certain I contributed to this chapter, including a number of the figures in the chapter.

Chapter 3 is the Economics of Alcohol Abuse. I believe I wrote portions or maybe most of the overview and methodology section reviewing the work of Dorothy Rice, Berry and Boland and some others.

I believe that I contributed to Chapter 3.A, which was on the direct health care costs.

I notice that there are several calculation procedures, and having not reviewed this document in a long time, I could not tell you very much about them at this time without detailed review. But I know that I did work on those calculations, and I believe that I developed several spreadsheets -- not user friendly, not menu-driven -- but just spreadsheets to calculate those estimates.

I know that some of the sources we used at that time went back to studies that had been conducted in the early 1980s at Research Triangle Institute; and that some of the documents from Research Triangle Institute, as well as studies by Dorothy Rice, helped

us look at and compile a list of diagnoses related to alcohol use and misuse.

The RTI study that I am referring to is referenced on page 22, among other locations, and it's Harwood, et al, 1984. As I mentioned, I have very incomplete recollection of calculation procedures, but I do know that in compiling the list of diagnoses, some distinctions were made between diagnoses that end in fatality, and that is a subset of diagnoses that would have been included or considered for, as an example, indirect mortality costs.

There was a more expansive list of diagnoses that may relate to alcohol morbidity or illness, not all diagnoses ending in death.

As I continue through here, I believe I contributed to chapter 3.B, on indirect mortality costs, and on page 38 there is a present value of future earnings by gender, and I believe that derived -- in fact the source was given -- that it was Rice, Hodgson and Kopstein.

Q Kopstein is K-O-P-S-T-E-I-N.

A And I believe, but I'm going to look up that reference, that that was one of the important documents that we examined.

As I now look at that, that was the economic

cost of illness, a replication and update, and I believe that dealt with the costs of all illness in the United States, not specifically caused by any lifestyle habit or restricted to any subset of diseases.

Q What study was that?

A Rice, Hodgson and Kopstein.

Q Where is the reference to where the study was published? On 38 it just says in press.

A In press. I do not have that.

Q Okay. Have you seen it published?

A If it has been published, I may well have seen it. I do not recall. Studies of this nature were fairly commonly published in health care financing review. That may have been the ultimate location. I believe that both Tom Hodgson and Andrea Kopstein were at the National Center for Health Statistics at that time, and Health Care Financing Review was where many of the NCHS major studies are published.

Q Okay.

A As I continue through this, I do again believe that most of the horizontal bar charts were produced by me.

Chapter 3.C, Employment Losses to Industry, I tend to recognize much less; and there are several coauthors besides David Parker and myself. I think

that I did not write this chapter or did not contribute very much to it if I did contribute.

I may be incorrect, but I don't recognize this very -- as something which I wrote.

Chapter 3.D, Reduced Productivity. I may have contributed to this chapter, and I believe I did, because at least the graph at the end I vaguely recognize, but again, I believe I produced. So I contributed to that chapter. I may have written major portions. I don't recall the extent of my writing.

Chapter 3.E, on Alcohol-Related Motor Vehicular Costs, I believe I may have contributed Figure 15. However, in contrast, Table 31 does not look like something which I recall producing. So I believe this may have had several authors.

Similarly, Table 32, I do not recognize as having contributed to. Again, I don't have very acute recollection of this.

Alcohol-Related Driving and Liquor Law Offenses, I believe I did not write.

Q Do you know who did?

A Did not.

Q Do you know who did?

A As I mentioned to you, the lead for the project was David Parker, and I believe a number of

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these chapters were contributed by him.

But I noticed two other persons, Lois Gertz, and Rima Jensen -- I wanted to say that before, I wanted to check that before I gave her last name -- I believe each contributed to several of these back sections. I can't remember what the division of labor was.

For instance, the next section, 3.G, is Child Abuse, and David Parker certainly had the overall authority on this. I believe Andy Dean had left at this point, and so Michael Moen also, I believe, reviewed the entire draft.

I do not know the extent of his edits. I do not remember his edits on portions that I wrote. But David Parker, I'm sure, reviewed the entire piece.

Fetal Alcohol Syndrome was similarly written by coauthors other than myself, and may have been written again by David Parker. All of the sections that I was not involved in I'm sure were closely reviewed and some I believe were primarily written by David Parker. Again, I don't have perfect knowledge of that.

(Whereupon, Defendant's Exhibit 962, Bates MN00444580, was marked for identification.)

BY MR. BRAMAN:

Q All right. I would like to show you a different document at this point which I think is an article that you contributed to that summarizes your 1985 study. I have marked this as Defendant's Exhibit 962.

Defendant's Exhibit 962 is a reprint of an article from the American Journal of Public Health entitled The Social and Economic Costs of Alcohol Abuse in Minnesota, 1983. The authors are David Parker, James Shultz, Lois Gertz, Ruth Berkelman and Patrick Remington, and the document has Bates numbers MN44580 through 584.

Can you identify, Dr. Shultz, Defendant's Exhibit 962 as an article that you contributed to that discusses the 1985 Cost of Alcohol study that we were just looking at?

A I believe the answer to your question is yes, but I wanted to read to the point where we actually cite the report, which is at the very end of the second paragraph in the introduction. And that sentence that cites that report that was Defendant Exhibit 215, Review and Cost of Alcohol Abuse in Minnesota, is cited in the last sentence of the second paragraph in the article which is Defendant's Exhibit 962.

Q That reference to --

A That references the large 1985 state report that we have just discussed and gone through section by section.

Q And is your recollection that Dr. Parker was the primary author of Defendant's Exhibit 962?

A My recollection is that Dr. Parker was the primary author.

Q Okay. If you look at the third page in on this exhibit, there's a paragraph that has a little bracket along the left in handwriting -- I don't know whose handwriting that is -- but it says in the second sentence, "According to the mortality comparison method, alcohol-related medical care costs were 363 million, and by the morbidity comparison method, alcohol-related costs range from 195 million to 288 million."

Can you tell me what the difference was between those two methods?

A At this time I cannot. If I were to go back to the cited document, the report, the methods are in there. I could review them.

I remember they were at least moderately complex, and I would not be equipped today, 12 years later, to remember and faithfully tell you what we did.

I do remember that several methods that were

used. As we briefly scanned the article, I believe we also suggested why we tried several methods.

Q Which was why, if you can recall?

A I believe in yesterday's discussion we described the fact that the information that we have for alcohol has less consistency and exactitude compared to what we have, for example, for cigarette smoking. I'm not sure if this was the situation specifically for the direct costs, but in particular, recall our decision yesterday that there are not consistent ways of assisting prevalence ways of alcohol use, as there are for cigarette smoking.

So, the fact that there is a range here reminds me that we looked at a range of assumptions. I simply don't remember what those were.

Q The measurement of prevalence of smoking is, for purposes of SAMMEC, done through surveys and based on self reporting; is that correct?

MR. ORENSTEIN: Objection, compound question.

A The measurement of prevalence that is used in SAMMEC or the data on prevalence, which can be inserted by the user of SAMMEC, usually a state health department or, at the national level, a government agency such as the Office on Smoking and Health; and those data are typically derived from surveys.

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As I mentioned yesterday, my recollection is that the national level, from the current population survey, at least in the SAMMEC II version, I believe. I have not reviewed SAMMEC 3.0 to find out if they have updated prevalence estimates and the source of that. So I cannot speak to the source of prevalence data that may appear, if it does appear at all, for national calculations performed by SAMMEC 3.0.

Q I can't recall, and I apologize, but were you also involved in 2.1, in updating SAMMEC to 2.1?

A After SAMMEC II was developed, I believe there were several additional I believe minor refinements, and there may have been some updating of some of the data included in SAMMEC at the national level. So I believe I also was involved in 2.1.

Q Did you work on the manual for 2.1 as well?

A I received a copy of the manual for 2.1, and I do not recall that there were major changes between II and 2.1. I would almost have to go through page by page. There may have also been changes in appendices, and that was not something that I contributed to.

Q Can you recall if you saw a draft of the manual and provided any comments or edits, or just received a copy of the manual after it was prepared.

MR. ORENSTEIN: 2.1?

MR. BRAMAN: Yes.

A After version II, I would say that a majority of the writing of the description of the software and certain sections, as we discussed in part yesterday examining the use of the software, were written by myself, and I do not think that documentation changed substantively between version II and 2.1. I would have to look carefully to see what differences might be there.

Since I did much of the writing up through version II, and I do not have a clear recollection on any additional or changed writing for 2.1, I would then have to say I've certainly seen and likely composed most of the drafts that particularly describe the menu structure and the options and the way to use the software.

(Whereupon, Defendant's Exhibit 961, Jim Shultz Thesis, was marked for identification.)

Q Your thesis. I would like to show you a copy of your 1988 thesis, which we have marked for identification as Defendant's Exhibit 961.

The first page of this document has in handwriting, Jim Shultz Thesis, 6/88 at the top as well as at the bottom, and it has Bates numbers MN163096 through 163383.

MR. ORENSTEIN: What is the exhibit number on this?

MR. BRAMAN: 961.

MR. ORENSTEIN: The last one I had was 962.

MR. BRAMAN: We went out of order.

BY MR. BRAMAN:

Q Can you identify Defendant's Exhibit 961 as your PhD thesis? Take whatever time you need to look through it.

A Yes, this is the PhD thesis or dissertation.

Q Can you describe for us your thinking in terms of how you organize it, what you were trying to accomplish in your thesis?

MR. ORENSTEIN: Objection, compound question.

A Although this is a very important document and bench mark in my career, like so many graduate students, a thesis is something you walk away from, and I have not revisited this document since the time that I defended it.

Q Let me --

A I am sure I had a pragmatic purpose in putting this together to finish my degree, and in talking with advisors who new that I was simultaneously working at the Minnesota Department of Health, the suggestion came up that one option for the dissertation

would be to have a compiled thesis or compiled dissertation, composed of already written and published materials that were cohesive and related to a particular topic.

In this case, this is a compendium of several of the published materials on which I had participated. And since a thesis typically also relates to unique individual contributions, I primarily put in materials that I had the lead role in producing or a major role in authoring.

And certainly the heart of this is the SAMMEC, at the first version, first menu-driven version, SAMMEC or SAMMEC I version, of the software, which I believe I could uniquely claim to be my own work and claim a portion of creativity in developing that; with the important caveat stated yesterday, that SAMMEC incorporates the wisdom of many others and doesn't break new ground in terms of calculation procedures, but makes those procedures available in software form to users at both national and state levels.

Q All right. Let me just ask you a few questions about some of the specifics in here. If you will turn in to the page that is marked 163109 in the lower right-hand corner, just a few pages in, it's the

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acknowledgment section.

About two-thirds of the way down in the second full paragraph, the sentence begins Michael -- is it Baizerman?

A Correct.

Q "Michael Baizerman provided extremely illuminating observations about the political, cultural, and metaphorical dimensions of cigarette smoking as a public health problem."

Can you recall what you meant by metaphorical dimensions of cigarette smoking as a public health problem?

A This is a page of acknowledgments. In some ways it's a "thank you" note to my committee. Michael Baizerman worked -- as far as I know, did not work in cigarette smoking.

Michael Baizerman was a person, in my graduate experience, who was probably the most esoteric, and so his comments tended not to be about science, but more about the implications -- and I don't recall the -- with any clear recollection the nature of our conversations.

I simply remember somewhat the nature of Dr. Baizerman, who is a person that to this day I find extremely delightful. He works actually a great deal

with sex workers in Minnesota. He has a very street savvy focus. He deals with the "kidness" of kids, rather than the sex work that they do. He actually has been an influence on the work that I do now, primarily with homeless persons, and my life after SAMMEC has been much more in what my chairman now calls "street public health."

So in one sense Mike Baizerman has been quite informative. This note here, however, was just really a thank you note, and "metaphorical" more than anything else describes Mike Baizerman.

Q How about the next sentence. you say Cheryl Perry -- this is the professor in the department of epidemiology at the U?

A The division of epidemiology included Robert W. Jeffrey, who is there. His specialty is primarily in obesity, but especially in behavior change, and he trained under Albert Bandura at Stanford, so a very strong behavioral background.

Cheryl Perry I believe also came from Stanford, and her focus is on youth health promotion. She's gotten beyond that and has been very good in developing theory of behavior change.

Q You say here that she contributed the notion of smoking-attributable disease impact estimation as a

health policy intervention. What do you mean "a health policy intervention"?

A I do not recall the specifics of why I wrote that sentence.

As I now think about it -- but I would have to check -- I am wondering if Cheryl Perry may have been on the youth subcommittee of the Technical Advisory Committee. That may have been where she contributed this notion.

Q Can you just explain to me what the notion is, describing disease impact estimation as a health policy intervention?

A Disease --

Q Go ahead.

A I did not pause, I'm sorry.

"Disease impact estimation" is a term which I applied -- I'm not sure if I was the first to apply it. It seemed to catch on, however -- to the approach that we described in detail yesterday, of looking at multiple measures to triangulate on a health problem. In the case of SAMMEC software, including mortality, years of life lost, and multiple economic estimations.

So, when she describes or when the sentence describes smoking-attributable disease impact estimation, we are really describing that multifocal,

multimeasure approach that was incorporated in SAMMEC. As a health policy intervention, I can only speculate that that relates to our discussion yesterday in our Journal of Public Health Policy article; that these estimates can be presented in a fashion such as supporting the omnibus plan as we described.

Q And that's the intervention, using the estimates to support some attempt to deal with the smoking issue?

MR. ORENSTEIN: I think it --

A I do not have further recall on this.

MR. ORENSTEIN: Excuse me. Objection. He testified that he could only speculate.

BY MR. BRAMAN:

Q Turn to the very next page. The second full paragraph, the second to the last line you say, "Mr. Moen's legislative skills ensured passage on Minnesota's nonsmoking legislation."

How did you learn about Mr. Moen's legislative skills?

A I would like to say on the record that the acknowledgments really represent a very editorial view of the world, and unlike much of the rest of the dissertation that may be more databased or may cite the research literature, these were generally warm comments

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from me to persons that I thought had either contributed specifically to the review of my dissertation, or to the work that was incorporated in the dissertation.

So I'm really hesitant to give a lot of weight to these comments, apart from what you might find in any acknowledgment section of any book or document, where a person generally gives thanks and expresses gratitude and gives compliments. So this is not a scientific statement, and it is not an objective estimate of Mr. Moen's talents in a legislative setting.

As I mentioned, I had the opportunity to observe Mr. Moen, and from the vantage point of myself, not trained in policy or legislation, and really a layman in that sense, my view was that Mr. Moen was skillful.

Q Okay. Let's turn to --

A Let me say one more comment.

Q Sure.

A I was thinking about this on the drive in. I am the deponent, I found that out yesterday, and I was thinking about how this process feels. I extrude a word in my brain and I look at it, pray over it, and then it goes on record.

But in real life, I tend to talk fast, I tend to talk in a complimentary way, and I am often pointed to as a person who uses superlatives. So this acknowledgment section reflects, if anything, a constrained piece of how I usually am, in both writing and speaking.

Q I appreciate that. Let's turn in to page 8 of thesis. It has 163119 in the lower right-hand corner.

The first full sentence at the top of the page talks about -- says, "Cost estimation provides singularly potent testimony before legislative bodies in support of nonsmoking programming, a forum where economics is the universal language."

Is this simply a reference to what we were talking about yesterday in terms of the uses of the calculations that you made?

MR. ORENSTEIN: Objection, ambiguous.

A This is in the second page of a chapter entitled Theoretical and Conceptual Issues. I was trying to write hopefully in an interesting manner for my reviewers, and as I have just described my own tendency to use language and stylistics and also to reflect my own sense of being impressed, whereas I described yesterday I was originally skeptical about

the power of economic estimates, they seemed to me at first to be quite crass, to take a public health problem involving loss of human life and great amounts of human suffering and put them in dollars and cents terms.

This is an opinion statement. It's an opinion that I still to this day I believe hold, which is that I am impressed that economic arguments, as we discussed in detail yesterday, seem to be, first of all, quite understandable to legislators; and what I was saying here, that economics -- again, this is my opinion, having observed really only one legislative process and only a portion of that -- is that economics and economic estimates and the balancing of dollars and cents seems to be important in the legislative process.

So that posing in this case the disease impact of cigarette smoking in economic terms seemed in some ways to be the language of the legislature from my viewpoint.

Q If you turn in to page 27 of your thesis, it has 163138 in the lower right-hand corner. In the first full paragraph you refer to disease impact estimates as a form of argument that have a political as well as a scientific reality, and then you include a quote from Gusfield, G-U-S-F-I-E-L-D, regarding the

impact of estimates.

And then you write, at the bottom of page 27, carrying over to the top of 28, "This strong prose from Gusfield is presented to alert researchers and policy makers who may apply disease impact estimates to the possible misuse of this data or any other scientific data in terms of misinterpretation, overinterpretation, failure to appropriately qualify the findings, or overextension of the authority of these data."

Do you still believe that those cautionary words are appropriate with respect to disease estimates like SAMMEC -- cost of disease estimates?

MR. ORENSTEIN: Objection, mischaracterizes the document.

A I would like to tease apart your question and answer portions at a time.

You will actually find, apart from the quote by Gusfield, which is a quote that's very thesis-like and is not going to appear in the SAMMEC manual, but you will find wording, if not verbatim, at least very similar to the last sentence actually appearing in the SAMMEC II -- I cannot say possibly also the SAMMEC 2.1 -- documentation. It may also be in the original SAMMEC documentation.

Mr. Braman, I feel very strongly, as a

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scientist, that is it is very important to caveat, and that is what we as scientists do in the discussion section of virtually every scientific publication, and to present limitations; and in this case, because this is going to be used potentially by persons at a government agency, scientists - but also nonscientists, policy makers - but also nonpolicy makers, and because the output may be presented in some fashion to the lay public, in one sense I am giving cautions that should be made whenever any data are presented.

You had mentioned specifically, you had slipped in the term "cost estimates," and my caution here relates to all estimates in SAMMEC. But my caution is not limited to SAMMEC or any portion of SAMMEC. It is in fact a caution that should be placed almost in disclaimer form, or maybe we should have a warning label, on scientific data to say: Be careful of how this is presented. Be careful that numbers have an officialness -- we described this yesterday -- the format in which data are presented.

And so this was intended, as a responsible scientist I hope, to say these, as we have discussed, are estimates rather than perfect point numbers. And as in any sort of estimation, certain assumptions are taken into account. So it is important to be very

truthful in presenting the data.

Q I don't recall seeing the same kind of cautionary language in SAMMEC, in the manual for the first version of SAMMEC, the menu-driven version, but we'll get to that in a little bit.

Do you recall having any discussions with anybody between the release date for the first menu-driven version of SAMMEC and the release date for SAMMEC II about the possibility of the misuse of SAMMEC or SAMMEC's output?

A The possible discussion that may have come up may have been with my dissertation committee. One important document that intervened between the publication of SAMMEC I and SAMMEC II was this current exhibit, my dissertation.

And as I had time to sit down and reflect and to -- in this I believe about 100-page introduction, which was new material written to compile and to describe the body of previously published documents -- and also this may sound a little bit academic because this was done for an academic audience, my PhD dissertation committee, but it seemed important enough to me to include it in the upgrade. I believe it was not an intentional omission in the first place; it had simply not been written.

Having written it here, and again, with a sense of responsibility, I chose to include it in the next round of SAMMEC software.

MR. ORENSTEIN: There's not any testimony that it wasn't in the first documentation. That was Mr. Braman's so-called testimony. So, I think there was no foundation for his statement.

BY MR. BRAMAN:

Q Turning to page 32 of your thesis, it has numbers 163146 in the lower right-hand corner, you describe three principal factors for the success of Minnesota's Omnibus Nonsmoking and Disease Prevention Act near the bottom of the carry-over paragraph.

Number one is development of a comprehensive smoking control plan as an effective launch point for nonsmoking legislation. That was the Minnesota Plan, correct?

A That was the Minnesota Plan.

Q Okay. Presentation of detailed health and economic impact arguments, and I assume there you are referring to the presentations made to the legislature and the legislators; is that correct?

MR. ORENSTEIN: Objection, overbroad.

A The health and economic impact data were presented, as previously discussed, in the review of

other publications, to the Technical Advisory Committee, to its subcommittees, through the Disease Control Newsletter and newspaper articles, to a broader readership, including the lay public, and also to legislators.

I believe the Journal of Public Health Policy article indicated in some cases individually and in some cases collectively in committees.

Q And the third factor is the coalition building among organizations concerned with the health consequences of cigarette smoking. What is that in reference to?

A We had mentioned, and if you notice the citation for Shultz and Moen, 1986, this I believe -- actually, I want to make sure that I have that correct, so I'm going to look at the citations.

Actually, this came in a brief, four-page newsletter published by the Centers for Disease Control called Health Education Focal Points. However, my recollection is that these three points were made in very similar fashion in the Journal of Public Health Policy document. I would like to check that if I could.

Q Sure.

A Actually, I do not see it in that document in

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quite that form. It may have been in the focal points article.

But the coalition building is described in detail in the article which I just mentioned, and is Exhibit 910, The Minnesota Plan for Nonsmoking and Health: The Legislative Experience, and the description of the coalition, which is also mentioned here on page 32 of my dissertation, is the same coalition.

Q The Coalition for a Smoke-Free 2000?

A I believe that was the name we used in the article on the Minnesota Plan, which by the way, is also included as one of the appended documents in the dissertation.

Q I take it the documents -- the articles you chose to append to your dissertation were the ones that you were a major author or contributor to and that you thought were important to the issue that was the subject of your thesis?

MR. ORENSTEIN: Objection, compound question.

A You've asked two pieces of information.

First of all, in order to be included in a compiled dissertation, I needed to be the primary author on most of the pieces or a major contributor.

Also for the purpose of the dissertation, I wanted the pieces to build together as a cohesive

whole, and this introductory set of pages both reviews the activities in which I participated, that we have described in great detail within the Center for Nonsmoking and Health, and ties together the particular documents that are assembled for the dissertation.

Q Just one or two more questions on your thesis. If you turn to page 41 please, it has 163152 in the lower right-hand corner.

There is a section on that page titled Attributable Risk Calculation, and you say that the most critical parameter in SAMMEC-generated calculations of disease impact measures is the smoking-attributable fraction for each smoking-related diagnosis.

What did you mean by saying that that was the most critical parameter? Critical in what sense?

MR. ORENSTEIN: Counsel, I haven't found that yet. Where are you?

MR. BRAMAN: The first sentence under Attributable Risk Calculation.

MR. ORENSTEIN: Thank you.

A The methods in SAMMEC are based on fundamental epidemiologic principles, and in coming up with an estimate of smoking-caused illness or death, we used attributable risk calculations. We began

describing those yesterday.

But the interpretation is the fraction, the smoking-attributable fraction, is actually the fraction of, as an example, deaths, that can be ascribed to the habit of cigarette smoking. It is a standard type of epidemiologic calculation, and it is applied throughout the software, diagnosis by diagnosis, and separately for men and women.

And for several estimates, I believe for primarily coronary heart disease, separately for ages 65 and over versus ages 35 to 64.

And so, as the software operates, in all five calculations, but particularly using identical smoking-attributable fractions, diagnosis by diagnosis, for men and women, those smoking-attributable fractions, SAF's, are identical throughout the calculations of mortality, years of life lost, and indirect mortality costs.

So that is the crucial calculation that passes through the data on mortality and generates, again, diagnosis by diagnosis for men and for woman, the smoking-attributable mortality, years of life lost, or costs, which are then summed for men, summed for women, and summed together.

Q Does SAMMEC use the same SAF -- strike that.

The SAF SAMMEC uses is one based on mortality as opposed to morbidity; is that correct?

A For the mortality measures -- and there are three of them -- mortality, years of life lost, which is actually the deaths, by age of death, okay, times the years of life lost for persons dying at a particular age of death. And the third measure is the indirect mortality costs, which is the deaths at the age of death, times the present value of future earnings for persons dying at that age.

So in that case, the SAFs are indeed based on the ratio of mortality. The relative risk that goes into the SAF is actually the ratio of deaths in smokers to deaths in nonsmokers. It's somewhat more complex, because we distinguish three categories: Current, former and never smokers. But you are correct. For mortality measures, we use what might be looked at as mortality ratios.

Q What about for the morbidity ratios at SAMMEC looks at?

A For the morbidity measures in SAMMEC, recall that these derived from -- I'm sorry. You are asking morbidity.

Q Yes.

A For the morbidity measures I would have to go

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back and look at what is used there as far as the ratios. It is not deaths, however.

Q The second line under Attributable Risk Calculations says, "The smoking-attributable fraction is the maximal proportion of disease cases that can be regarded as causally linked to cigarette smoking."

What did you mean by "maximal proportion of disease cases"? Is there a ceiling?

A I am not certain, because I actually just looked ahead at that sentence and would really want to defer on that to the person who is probably most knowledgeable about attributable fractions and has, in my reading, the greatest expertise on that, and that I believe is -- I think Steven Walter. But I need to double check that.

Going to the -- I remember seeing that definition, and I cannot recall -- is there another citation here?

Q Right.

A Okay. There is a Dictionary of Epidemiology by Dr. J. M. Last, and this may have been the source alternatively. I believe this may be cited in this article, in this dissertation.

S. D. Walter, The Estimation and Interpretation of Attributable Risk and Health

Research. I'm not sure if it derived from his work from the Dictionary of Epidemiology by J. M. Last, but at this point, as I'm reading this, I'm not sure of the interpretation of that. And I would not say this is the ceiling without going back to review attributable risk estimation, in particular the work of Steven Walter.

Q All right. One last question on your dissertation.

At page 78, which in the lower right-hand corner is 163189, you discuss on this page an apparent overestimate of smoking-attributable ischemic heart disease mortality that was identified by you in national calculations apparently in 1983.

Can you tell me what that was about?

MR. ORENSTEIN: Where are you on that page, Counsel?

MR. BRAMAN: First line, first paragraph -- first two lines, first paragraph.

A Mr. Braman, I'm taking just a moment to go back higher up, page 78 and then on to page 79.

BY MR. BRAMAN:

Q Whatever you need to read.

A I have some recollection of this, but I would like to refresh my memory.

Q That's fine.

A I can address that with at least partial recall. This is an argument that I made in 1988, and I don't have perfect recall about that. I believe that fairly early on, at least at the time that I was developing SAMMEC software, you will recall our discussion yesterday that I relied during that period of time on a series of Surgeon General's Reports.

Q '82, '83, and '84, I think.

A And the one which is cited in several points on page 78, USDHHS, that's U-S-D-H-H-S, which stands for U.S. Department of Health and Human Services. 1983, in my recollection, is the report on cardiovascular disease. It was a report of the Surgeon General.

One of the points that they mentioned in some of the studies described was that there was a tendency for the relative risk -- and I do not recall if this is the relative risk of dealt or of incidence, but the relative risk tended to decline with age.

In other words, that cigarette smoking was a particularly potent contributor to early cardiovascular disease, and in this case, coronary heart disease death. Perhaps with aging, as other risk factors became particularly prominent, a contribution of

cigarette smoking by itself was less powerful, is my recollection.

Persons who are expert in cardiovascular disease can speak more expertly about the interaction of several risk factors than I can. But what I noticed was that some of the information that was presented indicated that there was a decline in relative risk with age. And because that is a contributor to the attributable fraction, it would also mean that there would be a declining attributable fraction with age as well. Simply put, a smaller percent of coronary heart disease deaths or cases would be attributed to the habit of cigarette smoking in older ages.

At least at some point -- my recollection is not perfect here -- but I believe perhaps, in one of the summary sections of the 1983 report, as I looked at it, at least at one time -- and I'm not certain I was correct, but I believe that I checked this out -- I believe at least at some point in that cardiovascular disease document, when they came up with the overall estimate of coronary heart disease deaths, they applied I think a single relative risk estimate to heart disease deaths across the lifespan.

Yet other information, I believe cited in the same volume, indicated that the relative risk declined

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with age.

If you stratified and calculated smoking-attributable deaths age group by age group, a higher proportion would be attributable to smoking at earlier ages, and as you increase in age, a smaller and smaller proportion would be attributed to the habit of cigarette smoking on a population wide basis.

And I believe that when I did that stratified calculation, looking age group by age group in applying the relative risks that were supplied from one or several fairly important studies, that the estimate of smoking-attributable mortality was less than a figure that was given at some point in that 1983 Surgeon General's Report.

Now, as an impressionable graduate student, I was concerned, and I remember that one person I did talk to about this was then chairman of our department, Dr. Henry Blackburn, a very noted cardiovascular disease epidemiologist. I don't recall where it went beyond that. However, it did go into my discussions with a noted health economist, Dorothy Rice, and that is mentioned here.

And as part of that discussion -- I am not sure that I prompted that personally. I was not trying too give glory to myself here, but I also was trying to

be very ethical in my use of the data. So I pointed this out to Dorothy Rice, who made at least a partial correction based on what could be developed from the economics data. They did not have a lot of age groups, but she was able to calculate separately for persons below age 65 and for persons 65 and older.

That was incorporated into her estimates. It was also incorporated mine, and into the SAMMEC software. So I think some correction or a possible overestimate was made and is reflected in SAMMEC software, some health economics calculations, and I guess I may have played a role in that, as we are sort of always seeking to be more accurate.

(Whereupon, Defendant's Exhibit 963, Bates MN00129465 - MN00129481, was marked for identification.)

BY MR. BRAMAN:

Q I want to hand you a document now that we have previously marked for identification as Defendant's Exhibit 963.

Defendant's Exhibit 963 is titled Computer Software for the Calculation of Smoking-Attributable Mortality, Morbidity and Economic Costs. It's by yourself, Dorothy Rice and Thomas Hodgson. It indicates at the bottom of the first page that the

paper was presented at the American Public Health Association, 114th Annual Meeting in 1986 in Las Vegas. It has Bates numbers MN129465 through 481.

Is this the first publication that describes the menu-driven version of SAMMEC, what we've been referring to as SAMMEC I?

MR. ORENSTEIN: Objection, foundation.

A I do not know.

BY MR. BRAMAN:

Q Are you the primary author of Defendant's Exhibit 963?

A I am.

In answering your first question, in one sense the actual software itself, which came with documentation, was of course the first publication. This was an early presentation regarding that software.

Q Can you recall if you had made any other presentations regarding SAMMEC prior to this presentation?

A I cannot recall that. I believe this is the first made outside of Minnesota; if any were made perhaps locally, either in the Health Department or at the University.

Q How was it received?

A This may have been the first point in time or

possibly the second where I had a chance to meet face to face with Dorothy Rice, and that is much more what I remember. I don't recall the session where I presented this. And I don't recall the response.

I don't think a session on software was, you know, resoundingly received or attended. But I do remember the delight in meeting Dorothy Rice. I especially remember filling out the paperwork for this, and I was on the telephone to Dorothy Rice, and Dorothy Rice in my estimation was someone way up here, and I just really placed her on a pedestal. She's actually a remarkable and a very approachable person, and has an actual entourage of people who sort of follow her through the Public Health Association meetings. She is wonderful.

But we got down to the boxes where we had to describe, at that point in time, I think you had to actually mark in race/ethnicity. And I got down to that point and I literally stuttered, and I wasn't sure how to ask her, and I could hear her laughing on the other side, because I had only met her, even though in a number of telephone calls, by telephone. She said, "I'm white and I have white hair." She is wonderful. She's astonishing.

Q Did you author Defendant's Exhibit 963 and

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ask Dorothy Rice and Thomas Hodgson for comments and editorial remarks?

A I do not recall the extent of their comments and editorial remarks. I am the primary author.

Q All right. I'm going to be running through a series of documents as rapidly as I can, but before we do that, why don't we take a short break.

THE VIDEOGRAPHER: The time is 9:46. We are now off the record.

(Whereupon, a break was taken from 9:46 a.m. until 9:58 a.m.)

THE VIDEOGRAPHER: The time is 9:58. We're now back on the record.

(Whereupon, Defendant's Exhibit 964, Shultz position description, was marked for identification.)

BY MR. BRAMAN:

Q We were having some discussion yesterday about when you might have started your work at the Department of Health, and we've gone back and forth between the summer of '82 and the summer of '83, I think, and I came across a document last night that appears to be a position description that might describe what your position at the Department of Health and start dates, and I want to show it to you. It's

been previously marked for identification as Defendant's Exhibit 964.

Defendant's Exhibit 964 has Bates numbers MN283916 through 921, and the third page in is titled Position Description. It was prepared by Michael Moen, and the period under consideration is July 1, '83 to July 1, '84. I would like you to read the position description, Dr. Shultz, and let me know if you feel that this describes the position that you were first hired to at the Department of Health.

MR. ORENSTEIN: Counselor, are you asking whether this describes when he started at the department as you testified in introducing this question, or are you just asking him whether it describes his position?

MR. BRAMAN: I'm asking the question I asked, which is does this describe the position he was first hired to at the --

MR. ORENSTEIN: Well, you started with an assumption. Is his answer going to include that assumption, or is it just to your question?

What is the -- could the court reporter read back the question, please?

(The record was read by the reporter.)

MR. ORENSTEIN: I object to the form of the

question.

A The position description includes some of the activities that were performed by myself, but may also include some activities that were performed by Steve Gust.

I am thinking that this may be the position description for the entire full-time equivalent, and that subsets of these duties were divided between myself and Dr. Gust. But it looks consistent, and again, I can't comment on the dates, but these dates are within the range of what we've discussed. So this may well have been the position description put together before the full-time equivalent position was opened.

This seems more expansive than what I did personally, but it includes some activities which I participated in in the first years at the Health Department.

Q And the other marker we have for when you started would be the fact that shortly after you started at the Department of Health, you went to the conference up in Winnipeg with Dr. Dean, correct?

MR. ORENSTEIN: Objection, mischaracterizes the testimony.

A My testimony yesterday, I indicated that in

my best recollection, one of the very first activities -- perhaps the first activity which occurred very close to my start date was to attend the Winnipeg Tobacco and Health Conference.

So in my estimation, and again, based on my memory, that would be close to my start date.

(Whereupon, Defendant's Exhibit 916, Moen exhibits, was previously marked for identification.)

BY MR. BRAMAN:

Q Okay. I would like to hand you a document now that was previously marked for identification as Defendant's Exhibit 916. It's titled Exhibits for the Testimony of Michael E. Moen, Minnesota Department of Health. It has Bates numbers MN122898 through 915, and my question is whether you prepared or helped to prepare any of these exhibits in Defendant's Exhibit 916.

A I believe that I helped to prepare a number of the exhibits. I do not recall necessarily helping to prepare Exhibit 1.

However, I believe that I prepared or helped in preparation for many of the remaining exhibits. My recollection is due to recognizing two things. Beginning with Exhibit 11, I believe that these are

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graphs from Lotus that I had prepared in one of our rounds of cost estimation. And in many of the other exhibits, my recollection, based on the type font, was that this was actually done on a croy machine, and that I may have in fact personally punched out and taped up these exhibits, I believe actually on poster board with very, very fine crosshatched lines.

So I do recognize these, and I believe that I participated and may have taken the lead on putting them together.

Q Were the first calculations you ever performed to try to determine or estimate the smoking-attributable costs for Minnesota performed by you in 1984, or was it earlier or was it later?

Remember that in late 1983 the Technical Advisory Committee was put together, and we'll have a document that shows that. And you testified earlier that you used your calculations with the committee, or shared them with the committee.

The question is if you can remember when you first ever performed any calculation of the estimation of the health care costs attributed to smoking in Minnesota.

A My best memory, assuming a start date for the purposes of this discussion of July of 1983, would have

been certainly not right away, because I believe we first looked at mortality, but may have been as early as sometime in the fall of '83 or winter of '84.

(Whereupon, Defendant's Exhibit 223, Bates MN00119218 - MN00119226, was previously marked for identification.)

BY MR. BRAMAN:

Q All right. I'd like to show you another document that was previously marked for identification as Defendant's Exhibit 223.

Defendant's Exhibit 223 is a November 18, 1983 document over the signature of Kathy Harty that attaches some information dealing with the Technical Advisory Committee on Nonsmoking and Health, and the cover letter refers to an opening meeting that will be on November 28, 1983. It's dated November 18, 1983.

The attachment to the cover letter is titled The Committee Process, and it's three pages. And then there is a listing of the members of the Technical Advisory Committee at the end.

Have you seen -- did you see Defendant's Exhibit 223 sometime during the fall of 1983?

A I don't remember the time at which I may have seen this. I do not remember for sure if I did see this. But it is likely that I did because of our

involvement with the Technical Advisory Committee and my recollection of the acronym is accurate.

Q "TACoNoSH"?

A Yes.

Q Would you please turn to the second to the last page? It has 9225 in the lower right-hand coner. It lists the Minnesota Department of Health Committee Staff and Consulting Staff.

Can you recall what sort of consulting was provided to the Technical Advisory Committee by David Mills -- Davis Mills, I'm sorry.

A I only recall that Davis Mills was the director of Health Education. I believe that's the section or -- I don't know the organization, I think it was a section -- that had been the previous home of Kathy Harty, and he was in health education. But beyond that, I don't recall.

Q Can you recall what sort of consulting was provided to the Technical Advisory Committee by Charles Schneider, section chief of the environmental field services section?

A I have no recollection of Mr. Schneider.

Q Do you recall what sort of consulting was provided to the Technical Advisory Committee by Buddy Ferguson?

A No, I do not.

Q Did the participants at the meetings of the Technical Advisory Committee all contribute equally, or were there some people that were considered to be driving forces for the committee?

MR. ORENSTEIN: Objection. He's testified that he -- well, objection, foundation.

A I do not have strong recollection of the committee meetings. There may have been some persons who were more contributory, but I do not remember identifying key people up front.

BY MR. BRAMAN:

Q Can you recall any of the ones that were more contributory at this point in time?

A No, I cannot.

(Whereupon, Defendant's Exhibit 227, 1/4/84 document, Bates MN0019462 - MN00119466, was previously marked for identification.)

BY MR. BRAMAN:

Q Let me show you another document that was previously marked for identification as Defendant's Exhibit number 227.

Defendant's Exhibit 227 are the -- is titled Technical Advisory Committee on Nonsmoking and Health, January 4, 1984, 3 to 6 p.m. Minnesota Department of

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Health. There's a list of committee members and staff members. You are indicated as a staff member who was there, and it has Bates numbers MN119462 through 466.

I would like to ask you to turn in to the third page, and you will see that there are five different subcommittees listed, and your name appears under the information and data collection subcommittee.

Do you see that?

A Yes, I do.

Q Can you recall for us the focus of the information and data collection committee -- subcommittee?

A I cannot recall any specific directives or -- no, I cannot remember any specifics about the data collection subcommittee.

Q Why don't you turn in another couple pages to the last page in this document. And you will see that there are six listed items under information and data collection.

A Uh-huh.

Q Can you tell me what those items are? Do you recall? Not what the words say, but why they are there on the page.

MR. ORENSTEIN: Objection, foundation.

A I do not recognize this part of the memo, and

I do not have recall for what these -- in some ways almost cryptic notes mean.

(Whereupon, Defendant's Exhibit 965, 5/14/84 newspaper article, was marked for identification.)

BY MR. BRAMAN:

Q I will hand you a document that we previously marked for identification as Defendant's Exhibit 965.

Defendant's Exhibit 965 is a photocopy of a newspaper article dated May 14, 1984, titled Medical Treatment Adds Hidden Costs to Cigarettes, and it has Bates numbers MN129501 and 02.

Did the section or Center on Nonsmoking and Health, so far as you know, distribute press releases on the medical treatment costs related to cigarettes prior to the date of this article?

A This is dated May 14, 1984. Based on our discussion yesterday, there was a Disease Control Newsletter which also looked at a total of 89 cents per pack sold. If I recall correctly from our discussion yesterday, and certainly not from 13 years ago, but if I am correct, that was May 1984.

Q Correct. Defendant's Exhibit 212, Bates number 54781 has the article that heads up Health Care Costs Attributable to Current Cigarette Smoking in Minnesota: 89 Cents Per Pack Sold.

A I believe that information is contained here, and if we look through those two and compared, we would probably find that was the same information.

If the release date for the May 1984 Disease Control Newsletter was quite early in May -- and I don't recall if it came out immediately at the start of the month -- then in answer to your question it would be yes, and that would be my best recollection of how it was released.

Q Can you recall as you sit here today whether or not you had any interview with Lewis Cope, the staff writer listed on the article?

A I do remember having an interview with Lewis Cope.

Q Was it before the article was published?

A It was before the article was published.

Q How did the interview get set up?

A It was arranged I believe by Andy Dean. That is my best memory.

Q Did you have any discussions with Andy Dean about the purpose of the interview?

A I may have. I do not remember.

Q Do you recall as you sit here today why you sat in on the interview with Lewis Cope?

A I did the estimates, and I believe that point

is made in the article by Lewis Cope.

Q Fifth paragraph down.

Did Lewis Cope interview you and Dr. Dean together, or separately, if you recall?

A I am not sure.

Q Can you recall whether or not this was the first time you saw any article in the Minneapolis Star and Tribune that made or reported on estimates of costs attributable to cigarettes or to smoking?

A No, I cannot recall.

(Whereupon, Defendant's Exhibit 263, 7/6/84 Triplett Memo to Ashton, was previously marked for identification.)

BY MR. BRAMAN:

Q I would like to hand you another document previously marked for identification. This one was marked as Defendant's Exhibit 263.

It's a letter or memorandum on Minnesota State Planning Agency letterhead dated July 6, 1984, addressed to Sister Ashton from Tom Triplett regarding a summary of issues regarding July 2 meeting. It has Bates numbers MN647142 and 143.

The memo is not addressed to you, you are not indicated as being a CC recipient, but on the first page there is some handwriting in the upper right-hand

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that indicates a copy to MM, which Michael Moen testified was him, and to Jim Shultz and Kathy Harty, and then there is a note on the right which seems to be asking a question to Jim.

First of all, can you recall whether or not you ever saw Defendant's Exhibit 263 prior to your preparation for this deposition?

A I cannot recall having seen this. The notations would indicate that there's a good chance I did see it. I have no recollection of this document.

Q The handwriting to the right of paragraph 1 deals with alcohol abuse, hidden cost study. It says, as best I can read it, "Jim, can we ID anyone qualified to do this work at the U."

Do you recall having any discussions with anyone else within the Department of Health over who might work on an alcohol abuse hidden cost study from the University of Minnesota?

A I cannot recall any follow-up to this, as well as not recalling having seen this. Just by the notation, that indicates it's likely I did.

Q Okay. Item 3 says Taxation of Tobacco and Alcohol. The first sentence says, "The Governor will seriously consider tax increases on these items in order to help defray health costs associated with

cigarette smoking and alcohol abuse."

Do you see that?

A I do see that.

Q Does this help refresh your recollection over whether or not you were involved in any discussions regarding the possible use of cigarette excise tax increases to defray health costs associated with cigarette smoking?

MR. ORENSTEIN: Objection, mischaracterizes the document.

A This memo has, first of all, not been addressed to me, and the only point here that is highlighted is point number 1.

I cannot recall with any clarity specific meetings regarding excise tax. I can recall only vaguely hearing some things about the Governor's questioning the possibility of excise tax increases; but no memory of specific meetings or discussions.

I do not think point number 3 was addressed to me on this memo.

(Whereupon, Defendant's Exhibit 966, 8/17/84 Interoffice Memorandum, was marked for identification.)

BY MR. BRAMAN:

Q I will show you a document we've marked for

identification as Defendant's Exhibit 966. This document is a Minnesota Department of Health interoffice memorandum dated August 1, 1984, to Dr. Dean from Kathy Harty, Steve Gust and Jim Shultz of the Center for Nonsmoking and Health. The subject is a change level request. The document bears Bates numbers MN67114 through 132.

Can you identify your initials to the right of your name on the first page?

MR. ORENSTEIN: Objection, mischaracterizing the document.

A I'm not sure if those are my initials. I'm not sure about the slash and apparently some other initials following the J.S.

BY MR. BRAMAN:

Q Do you recall if you prepared any part of Defendant's Exhibit 966?

A The first part of Exhibit 966 contains the recommendations of the Technical Advisory Committee on Nonsmoking and Health. I believe a number of us on the staff of the Center for Nonsmoking and Health participated in composing, along with the Technical Advisory Committee meeting -- Technical Advisory Committee members, composing the actual wording of these recommendations.

I don't have time to count to see that they are the final version and final number. As far as the attachment 1, page 7 and onward, as far as the listing of required resources and some dollar amounts attached to that, I do not recall participating in this part of the document. Supplies and expenses and budget -- I do not recall participating in that.

Q How about the last page of the document which has estimated revenue generated?

A I do not know where the estimates -- who produced those estimates. I don't recall working on those myself.

(Whereupon, Defendant's Exhibit 267, 8/17/84 Moen Interoffice Memorandum, was previously marked for identification.)

BY MR. BRAMAN:

Q Giving you another document previously marked for identification as Defendant's Exhibit 267, this is a Minnesota Department of Health interoffice memorandum with Bates numbers MN122929 through 932. It's dated September 17, 1984, to Sister Mary Madonna Ashton and Dr. Valentine O'Malley from Michael Moen. The subject is Outline of Omnibus Smoking Prevention Act, 1986.

There's some handwriting at the top on the right that says "not for distribution," and it's

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underlined. Then there's a note says, "Steve, Jim, Kathy, for your comment. Please keep confidential."

Do you recall reviewing this document sometime in the fall of 1984?

A Based on what you have shown me and the fact that it is directed to my attention by the originator of this memo, Michael Moen, I am quite certain that I reviewed this memo.

I have no recollection of comments that I may have made. I do recognize some of the points in the outline, but I do not know if this is the first time that I saw those. Some were built into the actual bill itself, and I do recall, for instance, the discussion about the state and possibly expanding the -- the state excise tax.

And I just remember -- I was looking at section 4 B, and I do recall some discussion about the possibility of a lowered federal excise tax that might then tend to cause us to increase the state excise tax for the purpose of decreasing consumption.

Q Were you --

A So, I remember a few of those points were discussed.

Q Were you given the opportunity from time to time during the 1985 legislative session to review

drafts of the various bills that eventually became the Omnibus Nonsmoking Act?

A I do not recall being typically asked to review and comment. I do believe that I had the opportunity -- I know that I had the opportunity to see portions of the bill at various points in the legislative process.

(Whereupon, Defendant's Exhibit 967, Draft 1 of Memo to Mike Moen, was marked for identification.)

(Whereupon, Defendant's Exhibit 968, Draft 2 of Memo to Mike Moen, was marked for identification.)

BY MR. BRAMAN:

Q I want to hand you two documents together. They've been previously marked for identification as Defendant's Exhibit 967 and 968.

967 is Draft 1 of a memorandum from you to Mike Moen regarding cigarette smoking regulations for in-home daycare centers dated November 25, '84.

Defendant's Exhibit 968 is Draft 2 dated November 27, '84 of a memo from you to Mike Moen regarding cigarette smoking regulations for in-home daycare centers.

Defendant's Exhibit 967 has Bates numbers

MN122916 through 920, and Defendant's Exhibit 968 has Bates numbers MN121543 through 547, and my only question is to ask you to review these memoranda and let me know what the issue was that you were writing to Mike Moen about.

A Would you please repeat your question?

Q Sure. The question is: What was the issue that you were writing to Mike Moen about in each of these memorandum, Draft 1 and Draft 2?

MR. ORENSTEIN: Objection, foundation.

A It appears in both of the memoranda that I have, in a partially annotated form, examined the literature on childhood exposure to cigarette smoking and respiratory diseases, it appears, including sudden infant death syndrome, childhood asthma, childhood respiratory illness.

And section 2 it does indicate proposals for smoking restriction for in-home daycare centers, and I in particular do not remember writing those sections. It is clearly in my memorandum, but I'm not sure -- and this is actually in the second memo, in Draft 2? There is a Roman numeral II section.

At best, I can vaguely remember summarizing the literature, and primarily because I vaguely remember the unique last name of Rantalkallio, one of

the sources that's cited. But I really have no recollection of this memo and how this may have worked in terms of policy or what have you.

Q Had Mr. Moen asked you to give him a report on the literature regarding --

A These are addressed to Mr. Moen. I don't have a recollection of a request. I highly doubt that I would have -- I am certain I did not come up with this issue on my own. I expect this was in response to a request for more information.

Q Do you have any recollection as you sit here today as to whether or not in 1985 the Omnibus Nonsmoking Legislation prohibited smoking in in-home daycare centers?

A I don't. Based on the timing of this, it may have been a provision in the bill. But I don't recall that provision.

It might have been separate legislation, and I don't recall that, either.

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(Whereupon, Defendant's Exhibit 969, 1/14/85 New Conference remarks, was marked for

identification.)

BY MR. BRAMAN:

Q I would like to hand you a document we've marked for identification as Defendant's Exhibit 969.

Defendant's 969 is titled at the top Minnesota Department of Health/Nonsmoking Initiative, Remarks of the Commissioner of Health, News Conference January 14, 1985. It appears to have a January 2, 1985 stamp on it.

I know that I asked you yesterday, but I can't recall what your answer was, whether you had attended the news conference where the Commissioner of Health announced the Minnesota Plan or acceptance of the Minnesota Plan.

A I do not have clear recollection. I believe there's a good chance that I may have attended this, but I cannot remember specifically.

I believe there was an announcement at one point while I was in the Center for Nonsmoking and Health that may have been made in the actual Health Department Building by the Commissioner of Health, and this may have been that conference.

Q If you will turn to the second to the last page, in the lower left --

A Of the attachment?

Q Yes -- article.

MR. ORENSTEIN: Counsel, could we just specify? You introduced this document as a press release.

MR. BRAMAN: Let me clarify that attached to the first -- strike all that. The first four pages are remarks of the Commissioner of Health News Conference, January 14, 1985. The next two pages are a -- I'm sorry, the next three pages are a news release from the Minnesota Department of Health for immediate release January 14, 1985. And then the last attachment is a reprint of an article titled Minnesota Plan for Nonsmoking and Health: Multidisciplinary Approach to Risk Factor Control, and Dr. Shultz is listed as the second author there.

BY MR. BRAMAN:

Q Let me start with the article. Were you in fact, sir, one of the authors of the article entitled Minnesota Plan for Nonsmoking and Health Multidisciplinary Approach to Risk Factor Control?

A I am the second listed author.

Q Was Dr. Dean the primary author?

A Yes.

Q If you will turn in to the second to the last

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page of this article, there is a section titled, at the lower left-hand corner, The Events Since Release of Minnesota Plan.

Do you see that? Oops, not the second to the last page. I'm sorry. About four pages.

A Yes, I see that.

Q Okay.

A It's on page 274 of the article, according to the pagination, of Public Health Reports.

Q That's correct. Do you know who supplied the information for this portion of the article that describes the events since the release of the Minnesota Plan?

A I am not sure in this article who supplied the information. I believe that during the writing of this paper, at least in the final draft stages if not the entire writing process, that Dr. Dean had left the Health Department. And drafts I think may have gone back and forth. But I may be incorrect. May-June 1984.

I may be incorrect. In -- among our staff, the person who often compiled the activities and sequence then was Kathy Harty. But these may have been compiled by Dr. Dean himself.

Q Did you have an opportunity to review and

comment on a draft of this article before it was published?

A Since I am the second listed author, and the authorship is not alphabetical, I believe I did participate in the writing. I do not remember the division of labor.

Q Since you are listed as the second author, would you have necessarily approved the article for publication before it was published?

A If you are talking in terms of approval from the Minnesota Department of Health standpoint, that would have had to go through the executive office, I believe.

Q I'm talking about your own approval; if you were satisfied with it.

THE VIDEOGRAPHER: Can I change the tape before he answers that question?

MR. BRAMAN: I would rather you not.

THE VIDEOGRAPHER: Okay. Go ahead.

A I would be skeptical of answering that with the word "approval" in the question. My recollection is that Dr. Dean took primary responsibility for writing this, and I believe I provided some suggestions.

For some reason my recollection is that

Dr. Dean did not incorporate certainly all of those discussions, and I don't recall which ones he did. I believe he made the final judgment call as to what went into this paper. Again, my memory is imperfect.

MR. BRAMAN: Tape change. Off the record.

THE VIDEOGRAPHER: The Time is 10:43. We're now off the record.

(Whereupon, there was a break taken from 10:43 a.m. until 10:55 a.m.)

THE VIDEOGRAPHER: This is tape number 6, the videotaped deposition of Dr. James Shultz, we're now back on the record.

BY MR. BRAMAN:

Q During your testimony yesterday, you referred to certain anniversary reports of the Surgeon General. I think you referred to a 15-year anniversary report, a 25-year anniversary report. When you used that phrase, "anniversary report," were you referring to the anniversary of the 1964 Surgeon General's Report?

A The 1989 Surgeon General's Report came in a bright silver cover, and I believe actually said "25th Anniversary Report."

The 1979 report was notable for its three or four-inch width, and it was the largest ever published Surgeon General's Report to my knowledge, and I was the

one who designated it as the 15th Anniversary Report. In both cases relating back to the first Surgeon General's Report published on smoking and health in 1964.

Q Do you consider the publication of the 1964 Surgeon General's Report to have been a watershed event in terms of smoking and health issues?

A It has been interesting, and of course one of the sources for this actually is in subsequent Surgeon General's Reports. But in looking at the smoking prevalence rates, trends in smoking prevalence rates in this nation, they essentially reached a zenith just prior to the release of the 1964 Surgeon General's Report, specifically for men.

And in looking at a time line, a fairly familiar depiction, looking at four or five decades of smoking prevalence, particularly for men or for all persons combined, tends to have an arrow pointed at the 1964 mark where the Surgeon General's Report was released, which tended to be followed by at least a brief dip in the smoking rates.

I think researchers, both in that sense, where it actually has been highlighted as an important event, they also mention as an example, the Bonzof ruling regarding televised advertising and several

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other points in the time line of smoking.

So I believe it is regarded by smoking researchers as an important point, also in terms of public recognition and Surgeon General's statements about the health consequences of smoking.

Q From your perspective, what role did Mark Skubic play in the passage of the 1985 Omnibus Nonsmoking Legislation?

MR. ORENSTEIN: Objection, foundation.

A I do not know the role of Mark Skubic and the job description and his specific efforts.

Q Did you observe any of his efforts in connection with the legislation?

A My impression was that he assisted Mike Moen, but I have no direct recollection of his activities.

Q Can you recall any discussions you might have had with Mark Skubic regarding the proposed legislation?

A I believe Mark Skubic occasionally sat in on meetings that were conducted by Mike Moen. I don't recall any one specifically.

Q Does SAMMEC attribute the joint effect of smoking and any other lifestyle factor, such as alcohol, to smoking alone?

MR. ORENSTEIN: Objection.

A In the way that the question is asked, I believe there could be several interpretations. The method that is used in SAMMEC tries to comprehensively, disease by disease, estimate the proportion of deaths or years of life lost that can be ascribed to the habit of cigarette smoking. Many diseases have multiple causes. Some of the diseases related to cigarette smoking have other causes than cigarette smoking itself.

Several examples would be lung cancer and COPD, have cigarette smoking as a very predominant risk factor. But we've already described a little about coronary heart disease, where there are other risk factors in addition to cigarette smoking that are strong and important causal risk factors.

What you will notice about the smoking-attributable fractions is that they tend to be quite high in excess of 80 percent as examples, for diseases where smoking is particularly a strong and dominant cause. Again, the examples of lung cancer and COPD.

But in those diseases where there are other important risk factors, such as coronary heart disease, you will find that the smoking-attributable fraction is considerably smaller.

And in this way, based on epidemiologic studies that have been summarized by the Office on Smoking and Health, from which the relative risks have been summarized first by Office on Smoking and Health staff and then incorporated in SAMMEC into the attributable fraction calculations, there is generally an adjustment for the fact that there are other risk factors contributing to, for example, heart disease.

Q Who makes that adjustment?

A Based on the review of the literature for diseases that tend to have multiple risk factors, there are studies that tend to stratify for the different levels of the different factors.

In the area of coronary heart disease, as an example, I would have to go back, but I believe some of this is summarized in the 1983 Report. There were data from the pooling project and later in the 1980s, data became available from the lipid research clinics that looked at heart disease in relation to levels of blood pressure, levels of cholesterol, cigarette smoking -- I don't know in how many categories, but certainly smoking and nonsmoking -- and possibly more categories. So there are ways that you can make adjustments.

These, to some extent, are already in SAMMEC software, at least to the extent that they were

available and reflected in the relative risk estimates of the 1989 Surgeon General's Report. There may have been further adjustments of the relative risks by the version SAMMEC 3.0. I just do not know.

Q So the SAF used in SAMMEC comes out of the Surgeon General's Report?

A The SAF is calculated from two measures: The relative risk, which in the versions of SAMMEC that I worked on, SAMMEC itself, the original, came from a series of Surgeon General's Reports, primarily the 1982 report on cancer, the 1983 report on cardiovascular disease, and the 1984 report on chronic obstructive lung disease.

SAMMEC II, for many of the diagnoses included there, looked at the relative risks in the more updated 1989 quote unquote, "25th Anniversary" Surgeon General's Report, where relative risks were summarized across multiple categories of disease.

SAMMEC is amenable to changes in relative risks as one of the options available. If better relative risk data become available, they may be inserted and modified.

Q You said that the SAF is calculated from two things. Relative risk is the first.

A The second is the prevalence rate. The

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prevalence rate estimates are updated regularly, or at least periodically at the national level; and for states participating in the behavioral risk factor surveillance system, updated rather continuously at the state level.

Q Does SAMMEC adjust for health care costs that are attributable to poor nutrition, environmental exposure, lack of exercise and those sorts of factors?

MR. ORENSTEIN: Objection, compound question.

A You are talking about direct health care costs. At the time that SAMMEC was developed, the direct health care cost estimation did not make those adjustments. It was based on looking at morbidity measures. The earliest cost estimates had actually applied the ratios of deaths for smokers to nonsmokers.

Some of these documents included the work of Luce and Schweitzer as an example in the early 1980s.

Q Applied mortality rates to morbidity?

A Mortality ratios or looking at mortality in smokers to mortality in nonsmokers, and then applied those rates to dollar estimates.

That was found to be less -- that was found to be reasonable, but less precise, less related to health care than the estimates that were made in the mid 1980s by Rice and Hodgson and others, who came up

with the estimation methods that, as we discussed yesterday, appeared in Milbank Quarterly. And those were not based on ratios of mortality, but actually ratios of patient days for hospitalization.

Q And physician visits?

A And physician visits. Okay?

So that was an improvement that was built into SAMMEC and also SAMMEC II and 2.1, based on the methodology that was in Rice and -- Rice, et al, published in the Milbank Quarterly.

Subsequent to that time, I believe SAMMEC at this point -- SAMMEC 3.0 at this point does not calculate direct costs; awaiting some improvements in databases and calculation methods that I believe are in process.

Q Do you know what particular improvements in databases or calculation methods are being awaited?

A I know only in general terms.

Q Okay.

A In the general terms would be going from hospital days, as an example, and physician visits to some actual dollar -- actual financial dollar estimates of health care costs.

Q Anything else in that regard?

A No.

(Whereupon, Defendant's Exhibit 950, 6/25/87 letter, Bates MN176102 to MN276103 was previously marked for identification.)

BY MR. BRAMAN:

Q I would like to show you a document that was previously marked for identification as Defendant's Exhibit 950. This is a June 27, 1985 letter to the editor over your name and Michael Moen's name. It has Bates numbers MN176102 to 103.

Page 103 appears to be a photocopy of the letter to the editor that was actually printed in the newspaper, although it's hard to read.

Is that your signature that appears over your name on the first page of Exhibit 950?

A That is my signature.

Q Were you the author of this article -- or letter?

A The first signature is that of Michael Moen, and I may have contributed to this, but since he has the signature on the left side, I would attribute this to Michael Moen.

Q Can you recall any discussions you had with Mr. Moen over whether or not the Department of Health should send a response to the letter submitted by Phyllis A. Brown to the Star and Tribune that was

published apparently on June 24, 1985?

A I do not recall this particular response or the letter itself, which I can't read in this copy. As you can see, it's totally smudged out.

(Whereupon, Defendant's Exhibit 970, Letter to Editor, Bates MN00176214, was marked for identification.)

BY MR. BRAMAN:

Q Let me give you a document that we'll mark for identification as Defendant's Exhibit 970, which is simply a better copy of that letter to the editor.

MR. ORENSTEIN: What number is this?

MR. BRAMAN: 970.

A This appears to have the -- a response from Michael Moen and myself. But I don't see the copy -- I don't see the original letter.

Q No, we don't have that.

MR. ORENSTEIN: So 970 is not as you indicated, a better copy of the second page of 950?

MR. BRAMAN: Yes, 970 is a better copy of the second page -- no, I'm sorry. I misspoke. The attachment to 950 appears to be Phyllis Brown's letter that the first page of Defendant's 950 is responding to. Defendant's Exhibit 970 appears to

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be the publication of the letter to the editor that is the first page of Defendant's Exhibit 950.

Thank you for calling that to my attention.

MR. ORENSTEIN: Counsel, just -- I don't know that this is important, but as long as you are characterizing the documents, I don't think the letter that was actually published is exactly the same as the letter that is the first page of 950.

THE WITNESS: As I read it, it appears to be shortened and possibly edited -- in fact, it is edited to some extent that the printed version that appears in the -- looks like Minneapolis Tribune is what is marked in writing at the bottom of Exhibit 970.

BY MR. BRAMAN:

Q Do you recall generally that the Center for Nonsmoking and Health took whatever opportunities it could to try to better educate the public on the smoking and health, issue like sending a letter to the editor where they saw a previous article that seemed to be inaccurate in some respect?

MR. ORENSTEIN: Objection, overbroad.

A In the way that your question is worded, I am sensing that you have a particular event in mind, and I'm not --

Q No, I have no particular event in mind. I'm just wondering if, from discussions you had within the Center for Nonsmoking and Health while you were there, the practice, if you will, was to try to inform the public in whatever ways you could regarding smoking and health issues, including such examples as writing letters to the editor to correct someone's misimpression?

MR. ORENSTEIN: Objection, overbroad.

A I do not recall specifically anything about a -- at least a formal position on writing letters to correct misimpressions.

I cannot read the letter that was originally submitted by Phyllis Brown on the copy that you have given me, and can't make judgments about why the Health Department might have felt a need to respond to this particular or felt it desirable to respond to this particular letter to the editor.

I am not sure at what level the Department of Health -- not necessarily the Center for Nonsmoking and Health -- scanned the major newspapers or state publications, and at what level policy might have been in force to respond or decide to respond to certain types of letters.

I don't know that it was specific in any way

to the smoking issue.

Q Do you know -- strike that.

While you were with the Center on Nonsmoking and Health, did the Center have a formal policy or position with regard to educating the public about smoking and health issues?

A I tended not to work at the level of policy or to be well informed of policy that was departmental policy.

Q So you were not aware of any policy either way?

A So I was not aware, but I would like to state that public communications and informing the public was one of the major components of the Minnesota Nonsmoking Initiative. So that was -- whether it was a policy and I guess the word "policy" for me is troublesome because I'm not sure if you are asking for a written policy somewhere in the Department of Health. But --

Q My question was whether you were aware of any sort of policy, whether written, informal or otherwise?

A I was unaware. I am unaware.

(Whereupon, Defendant's Exhibit 971, Bates, Memorandum MN00162730 - MN00162731, was marked for identification.)

BY MR. BRAMAN:

Q Let me show you a document that we marked for identification as Defendant's Exhibit 971. It's a memorandum to the Minnesota Department of Health, Nonsmoking Program Staff from yourself, and it has Bates numbers MN162730 and 31.

The first question is whether that is your name or your first name to the right of your typewritten name at the top?

A That is.

Q And --

A My first name.

Q And the question is that this memorandum deals with an evaluation plan for nonsmoking programs, notes from discussion with Dr. Maurice Mittelmark, 9/3/85.

My question is, since you left the nonsmoking section at the end of '85 and moved into the AIDS unit, whether or not you are aware of an execution of an evaluation plan for nonsmoking programs.

A I am not aware of the execution of an evaluation program. I simply do not know.

My recollection -- and for clarity, Dr. Maurice Mittelmark was my graduate advisor in my PhD and also master of science course work. And he was, in my estimation, well versed in program

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evaluation.

So I believe that this reflects somewhat informal comments from my meeting with him to discuss some ideas for consideration for evaluation. I do not think that this reflects necessarily anything which was adopted in this form by the Health Department. These were just some notes reflecting on the topic of ways that a valuation might take place.

Q Evaluation of the nonsmoking programs funded by the '85 legislature was a part of the package that the legislature approved; was it not?

A I would have to go back to the provisions and the actual wording of the bill in its final form.

Q Do you agree that various studies in the literature have reported that the per lifetime medical costs for smokers has been found to be greater than, equal to, and less than that for smokers?

A Would you repeat the question?

Q Do you agree that various studies in the literature have reported that the per lifetime medical costs for smokers have been found to be greater than, equal to, and less than that for smokers?

MR. ORENSTEIN: Objection.

A I would like to focus on the word "found" as if these were databased studies.

My recollection, having not seen such articles for many years, is that arguments were made, some of those rather hypothetical, and I do not recall that they were based on data, because to my knowledge, I do not know of any studies that have followed smokers and nonsmokers over long periods of time compiling and computing and tallying their medical costs.

But there have been investigators who have hypothesized that the lifetime costs for cigarette smokers would be higher than for nonsmokers, would be equal, or would be less. And in the documentation for SAMMEC software, I specifically cite one example each of those possibilities.

Q If I were to substitute the word "may" for the word "found" in my question, that the literature has reported that other researchers have found that the lifetime medical costs for smokers versus nonsmokers may be greater than, equal to, or less than each other, would you agree with that statement?

MR. ORENSTEIN: Objection.

A No, I would not.

Q What about it do you disagree with?

THE WITNESS: Okay. Would you read that last statement back to me, please?

(The record was read by the reporter.)

THE WITNESS: "Found" is still in there.

MR. BRAMAN: Let me restate it and eliminate the word "found" altogether.

THE WITNESS: Thank you.

BY MR. BRAMAN:

Q Do you agree with the following statement: The per person lifetime medical costs may be greater, equal, or less for smokers compared to nonsmokers; however, the issue of whether smokers cost nonsmokers money or vice versa is unrevolved?

MR. ORENSTEIN: Objection. Let the record note that counsel is reading from a document that he hasn't shown the witness.

BY MR. BRAMAN:

Q Would you like to see this? This is your SAMMEC II manual?

A I recognize the wording, and I would like to comment on the following way. As I wrote those -- it sounded to me like two sentences or so -- one citing three articles, and the second ending with the word "unresolved" --

Q Uh-huh.

A -- I had done some literature search, as we have already described, including a literature search in the area of economic costs, and I had at the time

that these sentences were written, identified at least these three studies.

I do not remember the specifics of them, but I did note in that sentence in a very summary form, that one investigator -- and I believe some of these were health economists -- that one article, because I think some had multiple authors, indicated the -- in the reasoning process that they went through, that smokers might produce more costs throughout the entire lifespan than nonsmokers; that, in a second article, that the assumption would be likely to have equal lifetime costs for smokers and for nonsmokers; and then a third investigator or group of investigators had hypothesized the third possibility.

When I used the word "unresolved," to my recollection, I was simply saying something quite simple. Here are three illustrations: Higher costs for smokers compared to nonsmokers, equal costs, or lower costs. And that was a fair amount of literature that I had seen. It may have been all of the literature on that topic that I had located at that time. So to my mind, that was inconsistent. High, equal, low.

So I simply thought to myself, this doesn't seem to show consensus. It shows inconsistency. I

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can't make a judgment call in my mind. The issue of which would be higher, if either, is unresolved.

(Whereupon, Defendant's Exhibit 972, Bates MN00007343 - MN00007350, was marked for identification.)

BY MR. BRAMAN:

Q I want to hand you a document I'm going to mark for identification as Defendant's Exhibit 972.

Defendant's Exhibit 972 is a November 27, 1985 letter addressed to you from Roxanne Newland of UFE Incorporated with an attached news release, and it bears Bates numbers MN7343 through 7350.

And the first paragraph of Roxanne's letter to you says: I would like to thank you for your valuable assistance this fall in relation to the smoking issue. Your telephone consultation and sending additional materials was very helpful in finalizing our plans to implement an essentially smoke-free environment, quote unquote, "policy."

And my question to you, sir, is did you from time to time during your work with the Center for Nonsmoking and Health, consult with Minnesota employers on methods they could use to help make their environments smoke-free?

A First of all, I did not consult in a formal

or contractual way in any sense. Based on this letter, it appears that I may have talked to in this case Roxanne Newland on the telephone about her business's smoking policy.

My recollection is that the Health Department, for a number of years, had someone -- I don't recall what level of position -- but someone to at least discuss, and I believe this was often with businesses, the provisions of the Minnesota Clean Indoor Air Act, which dated back to 1975, almost eight years prior to my involvement with the Health Department.

And I believe from perhaps the time of passage of that Clean Indoor Air Act that there was someone who tended to be a point of -- to whom questions were directed regarding the Minnesota Clean Indoor Air Act, and I believe that that did relate to worksites.

Q Can you recall -- I'm sorry.

A I think in our data bank -- database -- filing cabinet -- that we had a file on workplace policies. And if called upon to answer this sort of a question, in this case from Roxanne Newland, because the general public could call on occasions, and I do not recall this particular conversation or encounter,

but it may have been possible to just mention some of the options available.

I believe that in the Minnesota Plan there had been some discussion of smoke-free environments, and some information had been collected related to that topic. So it sounds like it is possible some of that information may have been photocopied and sent on to Roxanne Newland.

And perhaps some of the points, either made in the Minnesota Plan or that I knew from reviewing some of that literature in support of the Minnesota Plan or the Minnesota Nonsmoking Initiative and the Omnibus Bill where some of these policies were considered, in some fashion it appears that I was able to enlighten her about discussion points and options that companies had implemented. And it sounds like I sent some literature to her, most likely reprints of documents that we had in our files.

Q Do you have a recollection as you sit here today of who would have been the point person to field questions from employers like you have apparently responded to before? Who was the person responsible for being that person before the Center for Nonsmoking and Health came into existence?

A I do not recall.

(Whereupon, Defendant's Exhibit 221, Charge to the Technical Advisory Committee, was previously marked for identification.)

BY MR. BRAMAN:

Q I would like to show you a document that was previously marked for identification as Defendant's Exhibit number 221. It's a one-page document titled Minnesota Department of Health Charge to the Technical Advisory Committee on Nonsmoking and Health, and it has Bates number MN8169 -- I think 2. It's cut off.

Do you know, sir, who was the author of Defendant's Exhibit 221?

A I am not sure which of us on the staff of the Center for Nonsmoking and Health may have contributed to writing this, but my impression was that it was principally authored by Andy Dean.

MR. BRAMAN: Off the record.

THE VIDEOGRAPHER: The time is 11:33. We are now off the record.

(Whereupon, a break was taken from 11:33 a.m. until 11:48 a.m.)

THE VIDEOGRAPHER: The time is 11:49. We are now back on the record.

BY MR. BRAMAN:

Q Have you heard the phrase "garbage in,

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garbage out"?

A I have heard that phrase.

Q Is it possible that a user of the SAMMEC software could commit operator error in inputting data?

MR. ORENSTEIN: Objection, calls for speculation.

A Would you rephrase the question?

BY MR. BRAMAN:

Q Can you help me out? What about it is confusing you?

A Well, when you say the word "commit," that sounds possibly intentional. I think that if we were to talk about the possibility for error in -- let me stop for a moment.

The SAMMEC software has been developed and then typically tested on, for instance, national data, and then carefully examined to make sure that the different calculations correctly do the computations.

What is input into the software at for instance the state level for mortality computations is state-specific prevalence and state-specific mortality, looking at the total deaths for men and women, but specifically divided out in certain age categories.

So, for each diagnosis, a number of numbers, I think about 16 numbers are put in, deaths

and age categories 35 to 39, 40 to 44, up to 85 plus, and you can figure out how many five-year age categories are there, 13 to 16, somewhere in that variety -- in that range. So, it is possible that data entry errors could take place.

Q If data entry errors were to occur, the output of SAMMEC would not be reliable; is that correct?

MR. ORENSTEIN: Objection.

A First of all, you would want, as in any calculation where data entry takes place, you would like to go back and verify, which you can do, that the data entry is correct. In which case the output should be correct.

Q If that step was not taken and if there was an error in the data entry, then the output would not be correct; is that true?

MR. ORENSTEIN: Objection. Calls for speculation.

A I would -- I am not aware of where that has happened. And because of the similarity in the data state by state and the data for the states and the nation, if there was any large error in data entry into a single cell, there would be probably an unusual number of, for instance, deaths attributed to a cause.

It's highly likely that that would be caught.

But I have not heard of times where there has been a problem with data entry. The menus make it fairly straightforward, allow the numbers to remain on the screen for checking before sending them in for computation into the spreadsheet. You can print out the entire data entry sheet to verify cell by cell that data have been entered correctly. You can go back into the menus and check to make sure that data have been entered correctly.

So I don't see a problem with SAMMEC that is in any way different from any other software or computation process involving data entry into a program.

Q You have several times referred to cigarette smoking as a habit. Do you believe that cigarette smoking is addictive?

A Addiction research is not my specialization, and there are many different ways that people use the term "addiction."

There is a Surgeon General's Report, as well as individual published studies, a number of them compiled into that volume on cigarette smoking and it's addictive nature. So my belief, but not my expertise, is that cigarette smoking is addictive.

Q Do you know for how long you've held that belief?

A I do not know when I first held that belief. I do know that when sufficient scientific evidence was assembled to be compiled into a Surgeon General's Report, and Surgeon General's reports tend to be published only when a critical mass of scientific information has been assembled, I believe that that really led -- added credence to the addictive nature of cigarette smoking.

Experts in the area had concluded that smoking was addictive, and I tended to believe, on the basis of a Surgeon General's Report being published, that there was considerable evidence among experts in that field, which I am not an expert in. And I guess that would support a personal belief that this is probably true.

MR. BRAMAN: I have no further questions at this time.

MR. ORENSTEIN: We would like to read and sign.

THE VIDEOGRAPHER: The time is 11:56. This ends the video deposition of Dr. James Shultz. We are now off the record.

(Whereupon, the deposition was concluded at

http://legacy.library.ucsf.edu/tid/zmq07a00/pdf
Source: https://www.industrydocuments.ucsf.edu/docs/ylgl0001

11:56 a.m.)

JURAT PAGE

_____

JAMES MICHAEL SHULTZ

Sworn to and subscribed before me
this _____ day of _____, 1997.

_____

Notary Public
My Commission Expires: _____

— — —

CERTIFICATE OF OATH

STATE OF FLORIDA:
COUNTY OF DADE:

I, the undersigned authority, hereby certify that JAMES MICHAEL SHULTZ personally appeared before me and was duly sworn.

WITNESS my hand and official seal this 17th day of July, 1997.

_____

TANYA WARD ENGLISH

— — —

REPORTER'S CERTIFICATE

STATE OF FLORIDA:
COUNTY OF DADE:

I, TANYA WARD ENGLISH, certify that I was authorized to and did stenographically report the foregoing deposition; and that the transcript is a true record of the testimony given by the witness.

I further certify I am not of counsel; I am not related to nor employed by any attorney to this suit, and am not financially interested in the outcome thereof.

Dated this 17th day of July, 1997.

_____

TANYA WARD ENGLISH

FLORIDA REALTIME
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7/18/97

JAMES MICHAEL SHULTZ
[DELETED]

CASE: Minnesota, et al vs. Philip Morris, et al
NUMBER: C1-94-8565
DATE: 7/10/97 and 7/11/97

Please be advised that your deposition, taken in the case mentioned above, has been transcribed and is ready for your signature.

You may wish to contact my office at your earliest convenience to make an appointment to read and sign the original transcript. The original transcript will be forwarded to the attorney who ordered it in 30 days, with or without your signature.

Thank you.

FLORIDA REALTIME REPORTING SERVICES

TANYA WARD ENGLISH, RPR

cc: Original transcript
All transcript certified copies

http://legacy.library.ucsf.edu/tid/zmq07a00/pdf
Support provided by the Industry Documents Library: http://www.industrydocuments.ucsf.edu/docs/ylgl0001

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(954) 767-0450

August 17, 1997

Richard Braman, Esq.
Gray, Plant, Mooty, Mooty & Bennett
3400 City Center
33 South Sixth Street
Minneapolis, MN 55402-3796

RE: Minnesota, et al vs. Philip Morris, et al
Case No. C1-94-8565
7/10 & 7/11/97 Deposition of JAMES MICHAEL SHULTZ

Dear Mr. Braman:

Enclosed is the original transcript of the deposition that you ordered, which was held pending reading and signing by the deponent. You received your copy of same previously.

As of this date, the following has occurred:

____ Our office has not been contacted by the deponent.

____ The deponent has read the original, and there were no corrections submitted.

____ The deponent has read the original, and the errata sheet is attached.

____ The deponent and/or deponent's counsel have contacted our office and advised that deponent would like to waive signature.

Thank you.

FLORIDA REALTIME REPORTING SERVICES, INC.

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